

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A pattern forming method comprising steps of:

forming a liquid-repellent thin film on an electrically insulating surface, the liquid-repellent thin film being repellent to a liquid composition;

~~horizontally moving positioning the electrically insulating surface,~~ a first nozzle and a second nozzle, ~~which are~~ the first and second nozzles being integrated, [[to]] so that the first nozzle and the second nozzle are in a region located above a selected portion of the liquid-repellent thin film with a spacing between the integrated first nozzle and second nozzle, and the thin film;

irradiating the selected portion of the liquid-repellent thin film with a plasma of a gas originating from the first nozzle to selectively provide affinity for the liquid composition to the selected portion, after the step of ~~horizontally moving positioning~~ the integrated first nozzle and second nozzle; and

applying ~~a drop of a~~ the liquid composition to the selected portion ~~irradiated with plasma by discharging a drop~~ from the second nozzle by drop discharging method, after ~~irradiating having irradiated~~ the first selected portion with the plasma,

wherein a predetermined pattern is formed by repeating said steps of ~~moving positioning,~~ irradiating, and applying. ~~[[.]]~~

2. (Currently amended) A pattern forming method comprising steps of:

forming a thin film having affinity for a liquid composition on an electrically insulating

surface;

horizontally moving positioning the electrically insulating surface, a first nozzle and a second nozzle, which are the first and second nozzles being integrated, [[to]] so that the first nozzle and the second nozzle are in a region located above a first selected portion of the thin film with a spacing between the integrated first nozzle and second nozzle, and the film;

selectively irradiating the first selected portion of the thin film with a plasma of a gas originating from the first nozzle to form a first groove or a first hole in the first selected portion or to modify the surface roughness of the selected portion, after the step of horizontally moving positioning the integrated first nozzle and second nozzle;

forming a first pattern by applying to the selected portion drop-discharging method in which a the liquid composition by discharging a drop is dropped to the first groove or the first hole in the first selected portion of the thin film from from the second nozzle after irradiating having irradiated the first selected portion with the plasma[[;]],

wherein a predetermined pattern is formed by repeating said steps of moving positioning, irradiating, and applying.

horizontally moving the integrated first nozzle and second nozzle to a second selected portion of the thin film with a spacing between the integrated first nozzle and second nozzle, and the thin film, after forming the first pattern;

selectively irradiating the second selected portion of the thin film with plasma from the first nozzle to form a second groove or a second hole in a surface of the second selected portion after step of horizontally moving the integrated first nozzle and second nozzle; and

forming a second pattern by drop discharging method in which applying a drop of the liquid

~~composition is dropped to the second groove or the second hole in the first second selected portion of the thin film from the second nozzle after irradiating the second selected portion with plasma[[.]]; wherein the first pattern and the second pattern can be configured to join with each other or to separate each other.~~

3. (Previously Presented) A pattern forming method according to claim 1, wherein the liquid composition comprises at least one selected from the group consisting of a conductive material, a resist material, a polymer material and a light emitting material.

4. (Previously Presented) A pattern forming method according to claim 1, wherein the liquid-repellent thin film is selected from the group consisting of a semiconductor film, a conductive film and a polymer film.

5. (Currently Amended) A pattern forming method according to claim 2, wherein the thin film having affinity for a liquid composition is selected from the group consisting of a silicon oxide film, silicon nitride film, a silicon oxynitride film and a metal oxide film.

6. (Previously Presented) A pattern forming method according to claim 1, wherein the irradiation with the plasma is performed at a pressure in a range of 1.3×10^1 to 1.31×10^5 Pa.

7-15. (Canceled)

16. (Previously Presented) A pattern forming method according to claim 2, wherein the liquid composition comprises at least one selected from the group consisting of a conductive material, a resist material, a polymer material and a light emitting material.

17. (Previously Presented) A pattern forming method according to claim 2, wherein the plasma irradiation is performed at a pressure in a range of 1.3×10^1 to 1.31×10^5 Pa.

18-22. (Canceled)

23. (Currently amended) A pattern forming method comprising steps of:

horizontally moving positioning a surface, a first nozzle and a second nozzle, which are the first and second nozzles being integrated, [[to]] so that the first nozzle and the second nozzle are in a region located above a first-selected portion of [[a]] the surface with a spacing between the integrated first nozzle and second nozzle, and the surface;

irradiating the selected portion of the surface with a plasma of a gas originating from the first nozzle to selectively provide affinity for a liquid composition having electrical conductivity, after the step of horizontally moving positioning the integrated first nozzle and second nozzle;

forming a conductive film by applying [[a]] the liquid composition having electrical conductivity to the selected portion irradiated with plasma by discharging a drop from the second nozzle by drop discharging method, after irradiating having irradiated the selected portion with the plasma;

forming a mask pattern made of a resist composition over the selected portion; and

etching the conductive film selectively according to the mask pattern to form a conductive pattern by pattern having conductivity in the selected portion using the mask pattern,

wherein a predetermined wiring pattern is formed by repeating said steps of moving positioning, irradiating, applying, mask pattern forming, and etching.

24. (Previously presented) A pattern forming method according to claim 23, wherein the gas is selected from the group consisting of He, Ne, Ar, Kr, Xe, oxygen, nitrogen and a combination thereof.

25. (Previously presented) A pattern forming method according to claim 23 wherein the mask pattern is formed by selectively applying the resist to the conductive pattern through a nozzle.

26. (Currently amended) A pattern forming method comprising steps of:
horizontally moving positioning a surface, a first nozzle and a second nozzle, which are the first and second nozzles being integrated, [[to]] so that the first nozzle and the second nozzle are in a region located above a selected portion of [[a]] the surface with a spacing between the integrated first nozzle and second nozzle, and the surface;

selectively irradiating the first-selected portion with a plasma of a gas originating from the first nozzle to form a groove in the selected portion of the surface or to modify the surface roughness of the selected portion, after the step of horizontally moving positioning the integrated first nozzle and second nozzle;

forming a conductive film by applying a liquid composition comprising a conductive material

~~to the selected portion to the groove by discharging a drop~~ from the second nozzle by drop discharging method, after ~~having irradiated~~ irradiating the first selected portion with ~~the~~ plasma; forming a mask pattern ~~made~~ of a resist ~~composition~~ over the ~~selected portion~~ groove after ~~having performed~~ performing the drop discharging method; and etching the ~~conductive film selectively according to the mask pattern to form a conductive pattern by pattern having the conductive material using the mask pattern,~~ wherein a predetermined wiring pattern is formed by repeating said steps of ~~moving~~ positioning, irradiating, applying, mask pattern forming, and etching.

27. (Previously Presented) A pattern forming method according to claim 26 wherein the gas is selected from hydrogen, CF₄, NF₃, SF₆, oxygen and a combination thereof.

28. (Previously Presented) A pattern forming method according to claim 26 wherein the mask pattern is formed by selectively applying the resist to the conductive pattern through a nozzle.

29. (Previously Presented) A pattern forming method according to claim 1, wherein the application of the liquid composition is performed at a pressure in a range of 1.3×10^1 to 1.31×10^5 Pa.

30. (Previously Presented) A pattern forming method according to claim 2, wherein the application of the liquid composition is performed at a pressure in a range of 1.3×10^1 to 1.31×10^5 Pa.

31. (New) A pattern forming method according to claim 23, wherein the etching is performed by locally discharging plasma from plural plasma discharge ports.

32. (New) A pattern forming method according to claim 26, wherein the etching is performed by locally discharging plasma from plural plasma discharge ports.